

REMARKS

This Amendment is filed in response to the Response to Amendment mailed April 21, 2006, the Advisory Action mailed Dec. 15, 2005, and the Final Office Action mailed Aug. 26, 2005, and supplements the Amendment mailed Jan. 26, 2006. All standing objections and rejections are respectfully traversed.

Claims 1-4, 9-19, and 22-49 are now pending in the case.

Claims 17, 22, 29, 34 have been amended to better claim the invention.

Claims 20 and 21 have been cancelled.

No claims have been added.

In the Response to Amendment mailed April 21, 2006, the Examiner requested arguments relating to independent claims 22, 26 and 29. Accordingly, the Applicant in this Supplemental Amendment addresses these claims and discusses the cited prior art references.

Claim Rejections – 35 U.S.C. 103

At paragraph 1 of the Final Office Action, claims 1-3 and 9-19 were rejected under 35 U.S.C. §103(a) as unpatentable over Martin, U.S. Patent No. 5,765,927 (hereinafter Martin), in view of *Real-Time Streaming Protocol (RTSP)*, Internet Engineering Task Force Request for Comment 2326 (hereinafter RFC 2326).

The Applicant addressed this rejection at length in the Amendment mailed Jan. 26, 2006. Accordingly, the Applicant respectfully refers the Examiner to that Amendment for a detailed discussion of why these claims are allowable.

At paragraph 2 of the Final Office Action, claim 4 was rejected under 35 U.S.C. §103(a) as unpatentable over Martin, in view of *Resource ReSerVation Protocol (RSVP)*, Internet Engineering Task Force Request for Comment 2205 (hereinafter RFC 2205).

The Applicant notes that claim 4 is a dependent claim that depends from an independent claim that is believed to be allowable for the above described reasons. Accordingly, claim 4 is also believed to be allowable.

At paragraph 3 of the Final Office Action, claims 17-19 were rejected under 35 U.S.C. §103(a) as unpatentable over Martin, U.S. Patent No. 5,765,927 (hereinafter Martin), in view of *Format of the RSVP DCLASS Object*, Request for Comment 2996 (hereinafter RFC 2996).

The Applicant's claim 17, representative in part of the other rejected claims, sets forth:

17. An intermediate network device for use within a computer network having a server configured to provide one or more data streams to a client, each stream having a corresponding bandwidth, the intermediate network device comprising:

means for determining traffic characteristics sufficient to identify a stream from the server to the client;

means for intercepting RTSP Describe Response messages sent from the server to the client and for determining the bandwidth of the stream from a field of the RTSP Describe Response messages;

a resource reservation protocol (RSVP) transmitter proxy configured to reserve resources within the computer network on behalf of the server for allocation to the stream and to generate and send one or more RSVP Path messages on behalf of the server, the one or more RSVP Path messages containing the network traffic characteristics and the bandwidth of the stream; and

means for obtaining a differentiated services codepoint (DSCP) value that is based on the bandwidth of the stream.

In relevant part, Martin discloses a host proxy service for extending RSVP-signaled Quality of Service to flows involving hosts that are not RSVP aware. *See* col. 1, lines 55-57. As part of this process, Martin's network device determines characteristics for the flow from an RSVP messages that "includes an RSVP common header identifying the message as a Path message and an RSVP object including the contents of the Path message. The contents of the Path message include a Sender TSPEC describing the flow that the sender expects to generate and an ADSPEC." *See* col. 4 line67 to col. 5, line 5. Indeed the TSPEC

RFC 2996 describes using a resource Reservation Protocol to handle a request for Quality of Service in a differentiated service (DS) network. Using RSVP with a DS network allows the RSVP message to carry Differential Service Code Points (DSCPs).

The Applicant respectfully urges that the combination of Martin and RFC 2996 teaches away from the Applicants "***means for intercepting RTSP Describe Response messages sent from the server to the client and for determining the bandwidth of the stream from a field of the RTSP Describe Response messages***" when considered in the context of the rest of the Applicant's claimed elements.

Specifically, one following the teachings of Martin and RFC 2996 would be led to construct an intermediate host proxy device that determines ***bandwidth of the stream*** using functionality provided in RSVP. That is, the device would examine RSVP fields such as the TSPEC field. Nothing in these references suggests that RTSP should be used in conjunction with RSVP for determining bandwidth. Indeed, neither reference even mentions RTSP. Accordingly, following the teachings of the references, one would be led astray from ***intercepting RTSP Describe Response messages sent from the server to the client and determining the bandwidth of the stream from a field of the RTSP Describe Response messages***, and instead would look to RSVP for mechanisms to determine bandwidth.

Accordingly, the Applicant respectfully urges that Martin and RFC 2996 are legally insufficient to make obvious the present claims under 35 U.S.C. §103, because of

the absence of the Applicant's claimed novel "***means for intercepting RTSP Describe Response messages sent from the server to the client and for determining the bandwidth of the stream from a field of the RTSP Describe Response messages***" when considered in the context of the rest of the Applicant's claimed elements.

At paragraph 4 of the Final Office Action, claims 20-25, 27, 29-32 and 34 were rejected under 35 U.S.C. §103(a) as obvious in view of Martin and Merwe et al., *Mmdump: A tool for Monitoring Internet Multimedia Traffic* (hereinafter Merwe).

22. A method for operating ***a router***, comprising:
receiving a Real Time Streaming Protocol (RTSP) message from a client, the message directed to a server, the client message requesting that the server begin sending a traffic flow to the client;
receiving a RTSP response message from the server, the response message responding to the message from the client;
examining the RTSP response message to determine a bandwidth for the traffic flow to the client;
transmitting, in response to the RTSP response message, a resource reservation request message (RSVP request message) to the client, the RSVP message establishing a path to the client;
receiving a RSVP Resv message from the client, the RSVP Resv message reserving resources for the requested traffic flow;
receiving a data message of the traffic flow from the server; and
transmitting the data message of the traffic flow with a resource reservation indicia in the data message, the resource reservation indicia to direct the data message to travel along the reserved resources.

Martin is described above.

Merwe describes a network monitor tool for monitoring packets of multimedia traffic and storing (i.e. "dumping") packets that meet certain criteria into a file for later analysis. See Section 3. The tool supports Real Time Streaming Protocol (RTSP). See Section 2.2. As part of RTSP, a client issues a DESCRIBE request for a media stream it is interested in. A server then responds with a response containing media specific infor-

mation about the stream, such as the encoding used, the clip length, average bit rate, etc. See Section 2.2.

The Applicant respectfully urges that the combination of Martin and Merwe does not suggest the Applicant's claimed "***a router....receiving a RTSP response message from the server, the response message responding to the message from the client; examining the RTSP response message to determine a bandwidth for the traffic flow to the client; transmitting, in response to the RTSP response message, a resource reservation request message (RSVP request message) to the client.***"

As described above, Martin is completely silent concerning RTSP, but rather suggests one should rely only upon the functionality of RSVP. While Merwe does discuss the use of RTSP, combining Merwe with Martin still does not show the Applicant's claims. Merwe simply describes the basic functionality of RTSP and that it may be used with streaming multimedia. There is no suggestion that ***a router*** should examine a ***RTSP response message to determine a bandwidth for the traffic flow to the client, and in response to the RTSP response message transmit a resource reservation request message (RSVP request message) to the client.*** That is, the interaction between the two protocols is entirely absent from either of the references.

Tellingly, Martin lacks any mention of RTSP and Merwe lacks any mention of RSVP. Thus even if the references are combined, there is still no suggestion of ***transmitting, in response to the RTSP response message, a resource reservation request message (RSVP request message) to the client.***

Accordingly, the Applicant respectfully urges that Martin and Merwe are legally insufficient to make obvious the present claims under 35 U.S.C. §103 because of the absence of the Applicant's claimed novel "***a router....receiving a RTSP response message from the server, the response message responding to the message from the client; examining the RTSP response message to determine a bandwidth for the traffic flow to the client; transmitting, in response to the RTSP response message, a resource reservation request message (RSVP request message) to the client.***"

At paragraph 5 of the Final Office Action, claims 28 and 35 were rejected under 35 U.S.C. §103(a) as unpatentable over Martin in view of Merwe in further view of Gai et al., *RSVP Proxy – Internet Draft* (hereinafter Gia).

Claims 28 and 35 are dependent claims that depend from independent claims that are believed to be allowable for the above described reasons. Accordingly, claims 28 and 35 are also believed to be allowable.

Allowable Subject Matter

At page 12 of the Final Office Action, claims 26 and 33 were indicated to be allowable if rewritten in independent form. In accord with the Examiner's suggestion, the Applicant rewrote these claims in independent form and the claims were allowed in the Advisory Action of Dec. 15, 2005. Subsequently, the Applicant noticed that the ordering of elements of in the claims, and other artifacts introduced by combining the independent claims and the dependent claims, made the claims difficult to follow and unclear. The Applicant has therefore reordered some of the claim elements and made other nominal corrections to improve clarity. Such changes are not believed to affect the allowability of the claims, as they simply improve clarity. Accordingly, the Applicant respectfully requests the allowability of these claims be maintained.

New Claims

In light of the Examiner's allowance of claims 26 and 33, the Applicant has added new claims 36-49 that particularly claim that the router snoops a second ***message from the server***, sent in response to a first message from the client, in order to determine bandwidth. Such claims are believed to be allowable in light of the Examiner's allowance of claims 26 and 33.

In the event that the Examiner deems personal contact desirable in disposition of this case, the Examiner is encouraged to call the undersigned attorney at (617) 951-2500.

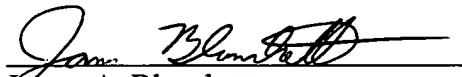
All independent claims are believed to be in condition for allowance.

All dependent claims are believed to be dependent from allowable independent claims.

The Applicant respectfully solicits favorable action.

Please charge any additional fee occasioned by this paper to our Deposit Account No. 03-1237.

Respectfully submitted,



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